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DOCKET NO.: L0501.70033US00

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Neal R. Butler

Serial No:

09/844,714

Confirmation. No.:

9562

Filed:

April 27, 2001

For:

METHODS AND APPARATUS FOR COMPENSATING

A RADIATION SENSOR FOR TEMPERATURE

VARIATIONS OF THE SENSOR

Examiner:

GAGLIARDI, Albert J.

Art Unit:

2878

Mail Stop Petitions Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir/Madam:

Transmitted herewith for filing is/are the following document(s):

- [X] Petition for Certificate of Correction
- [X] Copy of Title Page of U.S. 6,730,909
- [X] PTO Form 1050 (x2)
- [X] Return Post Card

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned collect at (617)720-3500, Boston, Massachusetts.

A check in the amount of \$230.00 is enclosed to cover the filing fee. If the fee is insufficient, the balance may be charged to the account of the undersigned, Deposit Account No. 23/2825. A duplicate of this sheet is enclosed.

## **CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)**

I hereby certify that this document is being placed in the United States mail with first-class postage attached, addressed to the Mail Stop Petitions, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on March 23, 2005.

Eleen Mackengie

Attorney Docket No.: L0501.70033US01

<u>XNDD</u>

Respectfully submitted,

James H. Morris Reg. No.: 34,681

WOLF, GREENFIELD & SACKS, P.C.

600 Atlantic Avenue

Boston, Massachusetts 02210

Tel. (617) 720-3500



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Mail Stop Petitions Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir/Madam:

## PETITION FOR CERTIFICATE OF CORRECTION UNDER 37 C.F.R. §1.183

Patentees hereby petition that the requirements of 37 CFR 3.81 be waived to correct Patentees error in naming the Assignee and that a Certificate of Correction be granted for the above-identified issued patent.

Due to a clerical error in the preparation of the issue fee transmittal, the name of the assignee was listed incorrectly. The name of the assignee listed on issued U.S. Patent No. 6,730,909 is BAE Systems, Inc., Lexington, MA. This is incorrect. The correct name of the assignee is BAE SYSTEMS Information and Electronic Systems Integration Inc., Nashua, NH.

Accordingly, item [73] of U.S. Patent No. 6,730,909 should read as follows:

# [73] Assignees: BAE SYSTEMS Information and Electronic Systems Integration Inc., Nashua, NH

Patentees enclose highlighted copies of the title page of U.S. 6,730,909 and PTO form 1050, in duplicate.

This Petition is accompanied by the fee set forth in 37 CFR §1.17(h) and the \$100.00 Certificate of Correction fee as set forth in 37 C.F.R. §1.20(a) 130.00. The Commissioner is hereby authorized to charge any deficiency in connection with this request to our Deposit

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Serial No.: 09/844,714 - 2 - Art Unit: 2878

Conf. No.: 9562

Account Number 23/2825. A duplicate of this sheet is enclosed. Should any questions arise concerning the foregoing, please contact the undersigned at the telephone number listed below.

## **CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)**

I hereby certify that this document is being placed in the United States mail with first-class postage attached, addressed to Mail Stop Petitions, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on March 23, 2005.

Attorney Docket No.: L0501.70033US01

Eleen Maskergie

James H. Morris

Respectfully submitted,

Reg No.: 34,681 WOLF, GREENFIELD & SACKS, P.C.

600 Atlantic Avenue

Boston, Massachusetts 02210

Tel. (617) 720-3500

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. :

6,730,909

DATED:

May 2, 2004

INVENTOR(S)

Neal R. Butler, Acton, MA

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the title page, item [73] should read as follows:

[73] Assignee: BAE SYSTEMS Information and Electronic Systems Integration Inc., Nashua, NH

MAILING ADDRESS OF SENDER

PATENT NO. 6,730,909

James H. Morris Wolf, Greenfield & Sacks, P.C. 600 Atlantic Avenue Boston, Massachusetts 02210

FORM PTO 1050 (Rev. 2-93)

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. :

6,730,909

DATED:

May 2, 2004

INVENTOR(S)

Neal R. Butler, Acton, MA

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PATENT NO. 6,730,909

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FORM PTO 1050 (Rev. 2-93)



## US006730909B2

## (12) United States Patent

## **Butler**

## (10) Patent No.:

US 6,730,909 B2

## (45) Date of Patent:

May 4, 2004

### METHODS AND APPARATUS FOR COMPENSATING A RADIATION SENSOR FOR TEMPERATURE VARIATIONS OF THE **SENSOR**

Inventor: Neal R. Butler, Acton, MA (US)

Assignee: BAE Systems, Inc., Lexington, MA (US)

Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

Appl. No.: 09/844,714

Apr. 27, 2001 (22)Filed:

(65)**Prior Publication Data** 

US 2002/0074499 A1 Jun. 20, 2002

### Related U.S. Application Data

Provisional application No. 60/201,577, filed on May 1, (60)2000.

(51)	Int. Cl. <sup>7</sup>	<b>G01J 5/20</b> ; G01J 5/24
(52)	U.S. Cl.	250/338.1; 250/339.09;
, ,		250/339.04; 250/352; 250/251.1; 250/332

Field of Search ...... 250/338.1, 339.04, 250/339.03, 339.09, 341.5, 352, 332, 252.1

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#### (List continued on next page.)

Primary Examiner—Albert Gagliardi (74) Attorney, Agent, or Firm-Wolf, Greenfield & Sacks, P.C.

#### **ABSTRACT** (57)

Methods and apparatus for compensating a radiation sensor for temperature variations of the sensor. In one example, the radiation sensor is a thermal sensor having at least one property that varies as a function of temperature. The thermal sensor outputs signals based on thermal radiation of interest from a particular radiating body in its view. These signals may contain significant undesirable components due in part to changes in temperature of the sensor itself. Methods and apparatus of the invention compensate the sensor for temperature variations of the sensor that are not due to the radiation of interest, so as to significantly reduce undesirable components in the instantaneous signals output by the sensor. In one example, this is accomplished without thermally stabilizing the sensor itself (i.e., dynamic temperature compensation). In another example, the sensor is thermally stabilized selectively at various predetermined temperatures as a function of the ambient temperature in the proximity of the sensor.

## 46 Claims, 11 Drawing Sheets

